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THE TIMING AND DURATION OF WOMEN'S LIFE COURSE EVENTS: A STUDY OF MOTHERS WITH AT LEAST TWO CHILDREN

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The Timing and Duration of Women's Life Course Events: A Study of Mothers With At Least Two Children

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Abstract:

This study examines the incidence and duration of women's life course events, specifically childbearing, by generational age structure within the family, birth cohort, educational status, and place of birth. Data from the 1995 General Social Survey (GSS) of Canada is used to estimate the incidence and socio-demographic correlates of age-structured families - age-condensed, normative, and age-gapped according to the mother's age at the birth of her first child. The results indicate that less than 10% of women with at least two children (N = 1,800) experience entrance into motherhood as a late life course event (e.g., at 30 years of age or older) as opposed to an early or "on-time" transition. Further, the mean birth interval is longer and family size is larger for age-condensed mothers versus normative and age-gapped mothers. Cohort differences regarding the incidence and duration of family life course events are also notable: older cohorts of women (1915-1930 and 1931-1946) have longer birth intervals and larger families than do women in younger cohorts (1946-1960 and 1961-1976). For level of educational attainment, women with less education marry at younger ages and have their first child at younger ages than their more educated counterparts. Finally, Canadian-born women marry and have their first child at younger ages compared to foreign-born women. Findings are discussed in the context of the literature on "age deadlines" and women's family life course events.

Introduction

Given the recent emphasis on the impact of changing demographics on the family life course in the research literature (George and Gold, 1991, Bengtson, Rosenthal and Burton, 1994), it is surprising that, to date, there have been few studies that have focused on age structure in the examination of family relationships. In particular, it is curious that social schedules or "timetables" (Gee, 1990, p. 280) and their related life course events have not been examined within the context of the family given the significance of the timing and duration of women's life transitions, specifically childbearing, on family dynamics. Recent exceptions in the literature have included research by Burton (1995), Caputo (1999), Gee (1990), and Setterstein and Hagestad, (1996).

In one of the few studies to identify age structure as salient to an understanding of support in later life families, Caputo (1999) examined the likelihood of coresidency among a mature cohort of American women between 1967 and 1995. Women in the sample were categorized as either age condensed (early childbearers) or age gapped (late childbearers) according to their age at birth of first child. The findings indicated that women who delay childbirth into their thirties – those who are defined as age gapped – are more likely to live with aging parents than are those who experience child birth as an early life course transition. Surprisingly, Caputo (1999) also concluded that black women are more likely to delay childbirth and reside in age gapped families than are white women.

Research on the timing of major life events, the basis for an understanding of age structure, has been undertaken by a number of researchers since Neugarten, Moore, and Lowe's (1965) seminal study on the normative aspects of life event timing. For example, variance in the perceived timing of women's life course events (i.e., finish school, first marriage, first birth, grandmotherhood) has been studied according to birth cohort, educational status, and place of birth by Gee (1990) in a sample of Canadian

women. Setterstein and Hagestad (1996) have furthered research in this area by examining variations in the perceived timing and duration of family transitions (i.e., leaving home, returning home, marrying, entering parenthood, completing childbearing, and entering grandparenthood) according to gender, race, birth cohort, occupation and education. Although both studies have made important contributions to the understanding of individuals' perceptions of "age deadlines" (Setterstein and Hagestad, 1996, p. 178), they have not examined the actual timing of the life events themselves.

Using a life course perspective, this paper examines the incidence and duration of women's life events by age structure, birth cohort, educational status, and place of birth, in a sample of Canadian women. Like Gee (1990), in her study on the preferred timing of women's life course events, the current investigation examines the extent to which women's internal sense of timing remains in spite of the changes that have occurred in social rules (norms) around marriage and the family over time. In doing so, the study marks the first step in responding to George and Gold's (1991) call for research into the significance of the timing of earlier life events, like marriage and childbearing, for the family life course. Further, in an attempt to build on Caputo's (1999) research, timing and duration is examined according to women's age structure, whether they are age condensed (21 years or under), normative (22-29 years), or age gapped (30 years or older) at the birth of their first child.

Increases in life expectancy and decreases in family size have resulted in longer periods of time women spend in intergenerational family roles (Hagestad, 1981, Riley, 1983). This increase in the duration of time women occupy the roles of, for example, wife, mother, daughter, and/or daughter-in-law, has implications for the negotiation of support between the generations over the family life course. Other research in the SEDAP (Social and Economic Dimensions of an Aging Population) Family and Aging series explores the consequences of women's fertility patterns – timing of birth of first child and birth interval – on the provision and receipt of social support in later life Canadian families (Rosenthal,

Martin-Matthews, Kobayashi, and Matthews, 2001).

Research Questions

Five research questions guide the analysis of age structure within Canadian families:

What is the incidence of age condensed, normative, and age gapped family forms according to mother's birth of first child in Canada?

Are there significant differences in the mean age at first marriage, mean age at first birth, mean birth interval, and mean family size, according to age condensed, normative, and age gapped family forms in Canada? It is important to examine the timing and duration of women's birth fertility patterns via age at first birth, birth interval, and family size data, because of the implications that this has for understanding directional flows of parent-child support over the family life course.

Are there significant differences in the mean age at first marriage, mean age at first birth, mean birth interval, and mean family size, according to mother's birth cohort? If yes, are there significant differences in these life event variables across age structure categories?

Are there significant differences in the mean age at first marriage, mean age at first birth, mean birth interval, and mean family size, according to mother's educational status? If yes, are there significant differences in these life event variables across age structure categories?

Are there significant differences in the mean age at first marriage, mean age at first birth, mean birth interval, and mean family size, according to mother's place of birth? If yes, are there significant differences in these life event variables across age structure categories?

Methods

In this study, we use data from the 1995 (Cycle 10) General Social Survey (GSS) to estimate the incidence and socio-demographic correlates of age-structured families – age condensed, normative, and age gapped – in Canada. The focus of the current investigation is on age structure according to the first and last births of children in families.

The 1995 cycle of the GSS is a quinquennial survey monitoring changes in Canadian family structures. Data for the 1995 GSS was collected monthly from January to December 1995. The target population was all persons 15 years of age and older living in private households in one of the ten provinces, excluding full-time residents of institutions. Using random digit dialing techniques, the sample population was selected. In total, 10,749 respondents were interviewed by telephone. For the purposes of the within-family study, both the main and child data files of the 1995 GSS data set were merged according to the identification number of the respondent before the sample was selected.

The selected sample for the current study (N = 1,800) is all female adults with at least two natural children at the time of the survey, who are categorized as either being age-condensed, normative, or age-gapped based on the age at the birth of their first child. This sample provides the basis for an exploration of within family age-structure for families with at least two children in the Canadian population[1]. The incidence of families in variations of the age condensed, normative, and age gapped categories is determined using *age at birth of first child* data for the sample. The mother's *age at first child's birth* is determined using the *respondent's current age* minus the *age of the first-born natural*

[1] Although data was collected for the age at birth of all children for the respondent in the 1995 GSS, it was not collected for age of respondent's (mother's) siblings. The study was therefore limited to a within-family investigation.

child.

In operationalizing age structure categories for first births, the following age ranges are used. As outlined previously, a respondent is age-condensed if she gave birth to her first child when she was 21 years of age or younger, normative if her first child was born between the ages of 22 and 29 years, and age-gapped if she had her first child at the age of 30 or older. The age range for the age-gapped category is consistent with Caputo's (1999) and George and Gold's (1991) categorization of first child born at age 30 or older. Although conceptually similar, the age range of the age-condensed grouping is slightly different from previous studies' definitions. In the current study, the maximum age of the age-condensed category is 21 years as compared to 19 years for the Caputo (1999) and George and Gold (1991) studies. Given the increasing ages at first marriage and birth of first child in Canada for women over the last half century, the increased age maximum for this category makes sense (Beaujot, 2000, p. 97). The normative age range (22-29 years) has not been a focus of past studies on age structure and aging families, thus, there is no research basis for comparison for this category.

Four dependent variables are examined: age of respondent at birth of first child; age of respondent at first marriage; the interval between respondent's first and last births; and respondent's total number of birth children. Three of the four dependent variables, age at first marriage, birth interval, and number of children are examined by the independent variable of age structure. All four dependent variables are examined by the independent variables of (1) respondent's birth cohort (2) respondent's educational attainment, and (3) respondent's place of birth.

Respondent's birth cohort is divided into four categories – women born from 1915 to 1930 (n = 437), women born from 1931-1945 (n = 454), women born from 1946 to 1960 – the Baby Boom cohort (n = 614), and women born from 1961 to 1976 (n = 295). Birth cohort is examined in order to highlight the degree of historical variation that exists in age structure according to normative aspects of women's

social timetables (Gee, 1990). Level of educational attainment is defined as high school diploma or higher (n = 1107) and less than high school diploma (n = 559). Place of birth categories are Canada (n = 1503) and other (n = 297). The latter two variables are included in the study in an attempt to build on the research by Gee (1990) into the normative dimensions of Canadian women's social timetables. As Gee (1990) points out, "educational level is likely to affect adherence to a system of age norms and the preferred timing of life events, given that higher education is associated with both the questioning of rules and older ages of actual role transitions" (p. 263). The inclusion of place of birth is based on the assumption that cultural background, immigrant or post-immigrant, may have an effect on the occurrence and timing of women's life course events.

For each of the four age structure variables and each of the four independent variables, a one-way analysis of variance (ANOVA) is performed. ANOVA analyses are done for respondents' mean age at first marriage, mean age at birth of first child, mean interval between respondent's first and last births, and the mean number of birth children.

The study is limited by the cross-sectional nature of the GSS data collection methods; specifically, the research is based on simulated cohorts and retrospective life accounts. For future research, longitudinal data collection, both quantitative and qualitative, is preferable for women's life course analyses.

Results

Table 1 presents the distribution of age structure categories for the sample; the proportion of respondents who are age condensed, normative, and age gapped at birth of first child. According to the table, 35.7% of women in the sample are age condensed, 55.2% are normative, and 9.1% are age

gapped. This result indicates that the majority (90.9%) of Canadian women in this sample have experienced the birth of their first child as an early life course event (i.e., before the age of 30 years) as opposed to a later transition.

[INSERT TABLE 1 HERE]

Also, Table 1 presents the means and standard deviations for respondent's current age, age at birth of first child, age at first marriage, birth interval, and number of children. The mean age of respondents in the sample is 50.9 years (SD = 15.8), indicating that the average mother in the sample is an early "Baby Boomer" (born around 1945-46). The data relating to mean age at first marriage and birth of first child show that respondents, on average, marry for the first time at 22.0 years (SD = 3.8) and have their first child at 23.5 years (SD = 4.1), falling in the normative age range. This means that, on average, women are waiting just over a year to have their first child. The mean birth interval between first and last births is 6.5 years (SD = 4.8) and the average number of birth children in a family is 3.1 (SD = 1.6), higher than the Canadian average of 2.3 according to the 1996 Census.

Examining the data by age structure category (see Table 2), the mean age of respondents at birth of first child is 19.4 years (SD = 3.3), while the mean age at first marriage is slightly higher at 19.6 (SD = 1.6) years for the age condensed group. This result is somewhat curious as it indicates that women in this category are marrying, on average, after they have had their first child. However, the increasing proportion of common-law couples who are having children in Canada over the past three decades supports this finding (Beaujot, 2000). These results differ significantly from those found for respondents in the normative category who have a mean age at first marriage of 22.6 years (SD = 2.5) and a mean age at first birth of 24.7 years (SD = 2.1). In the age gapped category, women have a mean

age of 28.0 years (SD = 4.2) for first marriage and 32.0 (SD = 2.0) years for age at birth of first child. Age gapped mothers, it seems, are following a more normative pattern of timing (according to 1996 Census data on marriage and the family in Canada) with respect to these two life events: marrying at later ages and having their first child a few years after marriage. The results for age at first marriage for normative mothers correspond to the findings on Canadian marriage patterns: during the first 70 years of the 20th century, marriages occurred earlier in peoples' lives (Beaujot, 2000), and parenthood usually followed shortly after marriage.

[INSERT TABLE 2 HERE]

Table 2 indicates that the birth interval for age condensed mothers is much longer at 8.1 years (SD = 5.6) than it is for normative or age gapped mothers at 5.9 (SD = 4.2) and 3.9 (SD = 2.3) years respectively. This difference is significant. Further, the number of children born in a family is significantly higher at 3.6 (SD = 1.8) for age condensed mothers than it is for normative or age gapped mothers, who have an average of 3.0 (SD = 1.4) and 2.5 children (SD = 0.7). This makes sense given that mothers who have their children earlier in the life course are more likely to have more children and to be able to spread their childbearing years over a longer period of time. Age gapped mothers, on the other hand, have less biological time to have children, and thus, tend to have smaller families over a shorter period of time.

[INSERT TABLE 3 HERE]

Cohort differences with reference to the timing and duration of women's life events are notable (see

Table 3). The distribution of responses is significantly different for all four dependent variables – first marriage, first birth, birth interval, and number of children. As expected, older cohorts of women (1915-1930 and 1931-1946) have longer birth intervals (9.5 and 7.0) and larger families (4.1 and 3.5) than women in younger cohorts (1946-1960 and 1961-1976), who have shorter birth intervals (5.3 and 3.9) and smaller families (2.6 and 2.4). The timing of first marriage and birth of first child also follow the age patterns for comparable cohorts in Beaujot's (2000) table of life course transitions (p. 97). For example, the mean age of mother for the two life events is younger for the 1931-1946 cohort (20.3 and 21.0) than it is for the 1915-1930 cohort (22.3 and 23.1). This supports Beaujot's (2000) findings from the 1995 General Social Survey for women in these two age cohorts. The mean ages at first marriage and birth of first child for women in the 1946-1960 cohort (22.1 and 24.2) are slightly higher than the means for women in the youngest cohort (22.0 and 22.6).

[INSERT TABLE 4 HERE]

Table 4 presents the results for age structure groups in each birth cohort. For age at first marriage, there are significant differences across all three age structure categories for each of the birth cohorts. For example, for the largest birth cohort, 1946-1960, the mean age at first marriage is 19.6 years for the age condensed group, 22.3 years for the normative, and 27.1 years for age gapped mothers. Similarly, for age at first birth, birth interval, and number of children, there are significant differences across all age structure categories. For the 1931-1945 birth cohort, the age at first birth ranges from a mean of 19.6 years for age condensed mothers to a mean of 32.0 years for age gapped mothers. The mean birth interval for age condensed mothers in the oldest group, the 1915-1930 birth cohort, is 12.0 years compared to the interval for age gapped mothers at 5.2 years. For the youngest cohort, the 1961-1976

group, the number of children ranges from a low of 2.0 for age gapped mothers to a high of 2.6 for age condensed women.

[INSERT TABLE 5 HERE]

For level of educational attainment, differences for all four life course events are significant. Women with less education marry at younger ages (21.4) and have their first child at younger ages (22.7) than do women with more education (22.3 and 24.2) (see Table 5). Less educated women also have larger families (3.7) and longer birth intervals (8.3) than do women with higher levels of education, who have smaller families (2.8) and a shorter mean birth interval of 5.4 years.

[INSERT TABLE 6 HERE]

Table 6 indicates that there are significant differences across all age structure groups on all four life event variables for both categories of educational status. For example, for mothers with high school education or higher, the age at first birth ranges from 19.7 years for age condensed women to 31.9 years for age gapped mothers. A similar age range for first birth is found for mothers with less than high school education. Also, for mothers with less than high school education, the mean number of children is highest for the age condensed group at 3.6 and the lowest for the age gapped group at 2.5. This pattern follows for those with high school education or higher as well.

[INSERT TABLE 7 HERE]

In terms of place of birth, there are significant differences for age at first marriage, age at first birth and number of children (see Table 7). Birth interval does not emerge as significant. Canadian-born women marry for the first time and have their first child at younger ages (21.9 and 23.4) than do foreign-born women (22.6 and 24.1). Further, Canadian-born women have slightly larger families (3.2) and a longer mean birth interval (6.6) than those who have immigrated from another country (6.4 and 2.9).

[INSERT TABLE 8 HERE]

The results from Table 8 indicate that there are significant differences across age structure categories for all four life event variables for both place of birth categories. Similar patterns are found across age structure categories for both Canadian- and foreign-born women on each of the life events. For example, for Canadian-born women, the mean age at first marriage for age condensed mothers is 19.5 years and 28.0 years for age gapped mothers. For foreign-born women, the mean age at first marriage is 19.9 years for age condensed women and 27.9 years for age gapped. Further, the mean birth interval pattern for Canadian- and foreign-born women is similar in that the interval is highest for age condensed mothers (8.2 and 7.7 respectively) and lowest for those who are age gapped (3.8 and 4.4).

Discussion

The current investigation adds to the research literature on "age deadlines" and life course events in that the findings have allowed for an examination of the timing and duration of actual life course events according to: mother's age structure at birth of first child; birth cohort, educational status, and place of

birth. The results indicate that, overall, the incidence and duration of life course events varies significantly across age structure, birth cohort, education, and birthplace. Further, there is variation across age structure groups – age condensed, normative, and age gapped – according to the four life event variables within each of the birth cohort, educational status, and place of birth categories.

In particular, age condensed mothers, as expected due to the operationalization of this age structure category, are significantly more likely to marry for the first time and have a first child at a younger age than their normative or age gapped counterparts. Age condensed mothers are also more likely to have longer birth intervals and larger families. Interestingly, the mean age at birth of first child precedes mean age at marriage, indicating that these life events are out of normative sequence for this group.

The findings on ages at first marriage and birth of first child support Gee's (1990) conclusion that women measure the success of their lives, in part, on the basis of how closely they approximate the internalized ideals of family life events. Of course, as the birth cohort results indicate, these "age deadlines" differ according to mothers' birth cohort. For younger cohorts of women, particularly those in the 1961-1976 cohort, being age condensed at birth of first child may lead to negative life cycle consequences, such as the increased likelihood of living in poverty and participating in social welfare programs (Hotz, McElroy and Sanders, 1999). For this cohort of women, age gapped family formations or the late timing of birth of first child is more normative than being age condensed, as women pursue higher education and career paths in early adulthood. Older cohorts of women (1915-1930 and 1931-1945), on the other hand, did not have the benefit of post-secondary educational and/or professional work opportunities available to them. Thus, early age at marriage and childbearing were considered "on time," and there were few, if any, negative life cycle consequences due to the perception of the traditional family model – husband as breadwinner and wife as homemaker and mother – as normative. This result corresponds to what Foner (1986) has described as the changing of societal age norms around

life event timing.

Looking at cohort differences across age structure groups, the study finds that for older cohorts of women, birth intervals are longer and family size is larger than they are for younger cohorts of women in all three age structure categories. This result makes sense within the context of family and childbearing patterns in Canada over time: cohort completed fertility rates have declined over time for five-year birth cohorts from 1927-1956 (Beaujot, 2000, p. 236).

Related to cohort differences, educational attainment is associated with the timing and duration of life events. Women with higher education are more likely to have higher mean ages at first marriage and birth of first child. The shorter birth intervals and smaller families characteristic of women in this group may be due, in large part, to the decrease in the biological time period within which they are able to conceive.

When educational attainment is broken down by age structure, women with less than high school education have longer birth intervals and larger family sizes than women with more education across all three age structure categories. It is important to note here however, that the sample in this investigation, like the one in Gee's (1990) study, over-represents more highly educated women. Thus, these results probably underestimate the degree of adherence to norms around the timing and duration of life events.

There is a significant relationship between place of birth and the timing of life events for women. Canadian-born women are more likely to marry and have their first child at an earlier age than are foreign-born women. Subsequently, they are also more likely to have larger families. Reasons for this difference include the understanding that smaller family size in immigrant families may be associated with financial difficulties in the early years of settlement and adjustment (Kibria, 1998). Family size and birth interval may also be affected by both age at immigration and marital status of foreign-born women in this sample. If the foreign-born sample immigrated as single adults to Canada, a lengthy period of

resettlement would certainly have an impact on age at marriage and subsequently, the age at the birth of first child.

The results for place of birth by age structure category indicate that foreign-born women have smaller families than their Canadian counterparts across all age structure groups. Birth intervals are slightly longer for age condensed Canadian-born women, but not for normative or age gapped mothers. Again, the timing of immigration in the life course, country of origin (i.e., Asian versus European), and acculturation process of these women are important factors to consider in explicating this finding. As with educational attainment, it is important to note here that the current sample overestimates Canadian-born women and thus, adherence to normative social schedules may be less prevalent than these results suggest.

Given that the current study takes a first step towards understanding the nature of women's life course transitions, it is necessary to include a discussion on the impact of the timing and duration of life events on a number of variables salient to the study of later life families, such as social support and value transmission. The decision to focus on first births of children in families is based on the recognition that family size and the birth interval of mothers are important factors in understanding aging family dynamics. If a first child is born age condensed and there is a twelve year birth interval in a family with two children, then the inconsistency in timing of these births may have different implications for social support exchanges for each child. While the first child may be out of the house, married, and helping parents with service tasks on occasion, the second child may still be at home, unmarried, and relying on parents for financial and service assistance. These support consequences, the result of early and delayed timing of life course events and the duration of these events, can vary across different socio-structural contexts. It is thus important to continue this investigation examining the relationship between age structure, according to the timing of births, and social support in later life. Rosenthal, Kobayashi, Martin-Matthews, and Matthews paper in this series addresses this key research issue.

References

Beaujot, R. (2000). *Earning and Caring in Canadian Families*. Peterborough, ON: Broadview Press.

Bengtson, V.L., Rosenthal, C.J., and Burton, L. (1995). Families and aging: Diversity and heterogeneity. In M.R. Rank and E.L. Kain (Eds.), Diversity and change in families (pp. 345-361). Englewood Cliffs: Prentice Hall.

Burton, L.M. (1995). Intergenerational patterns of providing care in African-American families with teenage childbearers: Emergent patterns in an ethnographic study. In V.L. Bengtson, K.W. Schaie, and L. Burton (Eds.), *Adult Intergenerational Relations: Effects of Societal Change* (pp. 79-96). New York: Springer.

Caputo, R.K. (1999). Age-condensed and age-gapped families: Coresidency with elderly parents and relatives in a mature women's cohort, 1967-1995. *Marriage and Family Review*, *29(*1), 77-96.

Connidis, I., Rosenthal, C.J., and McMullin, J.A. (1996). The impact of family composition on providing help to older parents. *Research on Aging*, *18*(4), 402-429.

Curran, S., McLanahan, S., and Knab, J. (1998). Ties that bind: Marital history, kinship ties and social support among older Americans. Paper presented to the Population Society of America Annual Meeting, April 1-4, 1998, Chicago, IL.

Eggebeen, D.J. (1992). Family structure and intergenerational exchanges. *Research on Aging*, *14*, 427-47.

Foner, A. (1986). *Aging and Old Age: New Perspectives*. Prentice-Hall: Englewood Cliffs, NJ.

Gee, E. (1990). Preferred timing of women's life events: A Canadian study. *International Journal of Aging and Human Development, 31(4),* 279-294.

George, L.K., and Gold, D.T. (1991). Life course perspectives on intergenerational and generational connections. *Marriage and Family Review*, *16*(1-2), 67-88.

Hao, L. (1996). Family structure, private transfers, and the economic well-being of families with children. *Social Forces*, *75*(1), 269-292.

Hotz, J.V., S. Williams McElroy, and S.G. Sanders (1999). Teenage childbearing and its life cycle consequences: Exploiting a natural environment. UCLA: Department of Economics, unpublished manuscript.

Kibria, N. (1998). Power, patriarchy, and gender: Conflict in the Vietnamese immigrant community. In S. Ferguson (Ed.), *Shifting the Center: Understanding Contemporary Families* (pp. 198-212). Mountain View, CA: Mayfield.

Neugarten, B., J.W. Moore, and J.C. Lowe (1965). Age norms, age constraints, and adult socialization. *American Journal of Sociology, 70*, 710-717.

Rosenthal, C.J., A. Martin-Matthews, K.M. Kobayashi, and S. Matthews (2000). *Changes in Family Structure: What are the Consequences for Older Parents?* Paper presented at the Gerontological Society of America's 53rd Annual Scientific Meeting, November 17-21.

Setterstein, Jr., R.A. and Hagestad, G.O. (1996). What's the latest? Cultural age deadlines for family tramsitions. *The Gerontologist, 36(2),* 178-188.

Table 1: Definitions, Means, Standard Deviations, and Percentage of Female Canadians at Age of First Birth in Age Structure Categories (N = 1800)

	Mean	*SD*	*%*	*N*
Age Structure Category:				
Age Condensed			35.7	643
Normative			55.2	994
Age Gapped			9.1	163
Respondent's Age at First Marriage	22.0	3.8		
Respondent's Age at Birth of First Child	23.5	4.1		
Birth Interval between First and Last Births	6.5	4.8		
Total Number of Birth Children	3.1	1.6		
Respondent's Current Age	50.9	15.8		

Table 2: Means and Standard Deviations for Life Event Variables By Age Structure (N = 1800)

	Age Condensed (n = 643)		*Normative (n = 994)*		*Age Gapped (n = 163)*		
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*F*
Life Event Variables:							
Age at first marriage	19.6	3.3	22.6	2.5	28.0	4.2	517.0***
Age at first birth	19.4	1.6	24.7	2.1	32.0	2.0	3163.4***
Birth Interval	8.1	5.6	5.9	4.2	3.9	2.3	72.6***
Number of children	3.6	1.8	3.0	1.4	2.5	0.7	46.4***

*** $p < .001$

Table 3: Means and Standard Deviations of Life Event Variables by Birth Cohort (N = 1800)

	1915-1930 (n = 437)		*1931-1945 (n = 454)*		*1946-1960 (n = 614)*		*1961-1976 (n = 295)*		
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*	*F*
Life Event Variables:									
Age at first marriage	22.7	4.5	21.4	3.6	22.1	3.7	22.0	2.8	8.0***
Age at first birth	24.0	4.2	22.6	3.8	24.2	4.4	22.6	3.5	21.4***
Birth Interval	9.5	5.8	7.0	4.6	5.3	3.8	3.9	2.5	119.8***
Number of children	4.1	2.0	3.5	1.7	2.6	0.8	2.4	0.7	135.2***

*** $p < .001$

Table 4: Means and Standard Deviations of Life Event Variables For Age Structure Groups in Each Birth Cohort (N = 1800)

	1915-1930 (n = 437)				*1931-1945 (n = 454)*				*1946-1960 (n = 614)*				*1961-1976 (n = 295)*			
	AC (131)	N (256)	AG (50)	F	AC (207)	N (219)	AG (28)	F	AC (185)	N (351)	AG (78)	F	AC (120)	N (168)	AG (7)	F
Life Event Variables:																
Age at first marriage	19.4 (4.4)	22.9 (2.6)	29.7 (3.7)	168.1 ***	19.3 (3.0)	22.6 (2.5)	27.0 (4.5)	122.4 ***	19.6 (3.1)	22.3 (2.5)	27.1 (4.3)	168.7 ***	20.3 (2.6)	22.8 (2.2)	28.4 (1.4)	48.0 ***
Age at first birth	19.6 (1.6)	24.6 (2.2)	32.3 (2.2)	738.9 ***	19.6 (1.5)	24.2 (2.0)	32.0 (2.1)	792.6 ***	19.3 (1.5)	25.1 (2.2)	31.9 (1.8)	1215.5 ***	19.3 (1.7)	24.7 (2.1)	30.6 (0.8)	342.5 ***
Birth Interval	12.0 (6.8)	9.2 (5.0)	5.2 (2.9)	30.0 ***	8.5 (5.0)	5.9 (3.9)	4.0 (2.0)	24.7 ***	7.1 (5.0)	4.8 (2.9)	3.3 (1.6)	39.2 ***	4.9 (2.9)	3.3 (1.9)	1.6 (1.0)	20.2 ***
Number of children	4.8 (2.2)	4.0 (2.0)	2.7 (3.7)	21.2 ***	4.0 (1.9)	3.2 (1.4)	2.5 (0.6)	22.0 ***	2.9 (1.0)	2.5 (0.7)	2.4 (0.5)	16.7 ***	2.6 (0.9)	2.2 (0.5)	2.0 (0.0)	9.8 ***

*** $p < .001$

Table 5: Means and Standard Deviations of Life Event Variables By Educational Status (N =1666)

	High School or Higher (n = 1107)		*Less then High School (n = 559)*		
	Mean	*SD*	*Mean*	*SD*	*F*
Life Event Variables:					
Age at first marriage	22.3	3.4	21.4	4.2	21.0***
Age at first birth	24.2	4.0	22.7	4.0	106.8***
Birth Interval	5.4	3.9	8.3	5.5	146.1***
Number of children	2.8	1.2	3.7	1.8	137.6***

*** $p < .001$

Table 6: Means and Standard Deviations of Life Event Variables For Age Structure Groups in Each Educational Status Category (N =1666)

	High School or Higher (n = 1107)				*Less then High School (n = 559)*			
	AC (293)	*N (695)*	*AG (119)*	*F*	*AC (553)*	*N (823)*	*AG (127)*	*F*
Life Event Variables:								
Age at first marriage	19.6 (2.3)	22.6 (2.4)	27.5 (4.4)	365.6***	19.5 (3.2)	22.6 (2.5)	28.0 (4.3)	138.5***
Age at first birth	19.7 (1.4)	24.9 (2.2)	31.9 (2.0)	1728.4***	19.4 (1.6)	24.7 (2.1)	31.9 (1.9)	1008.7***
Birth Interval	6.8 (4.7)	5.2 (3.6)	3.6 (2.1)	34.0***	8.2 (5.7)	5.9 (4.2)	3.8 (2.1)	12.3***
Number of children	3.1 (1.4)	2.7 (1.1)	2.5 (0.7)	16.5***	3.6 (1.8)	3.0 (1.5)	2.5 (0.7)	9.4***

*** $p < .001$

Table 7: Means and Standard Deviations of Life Event Variables By Place of Birth (N = 1800)

	Canadian-born (n = 1503)		*Foreign-born (n = 297)*		
	Mean	*SD*	*Mean*	*SD*	*F*
Life Event Variables:					
Age at first marriage	21.9	3.7	22.6	4.1	7.8**
Age at first birth	23.4	4.1	24.1	4.3	8.4**
Birth Interval	6.6	4.9	6.4	4.4	0.3 (NS)
Number of children	3.2	1.6	2.9	1.3	7.5**

** $p < .01$

Table 8: Means and Standard Deviations of Life Event Variables For Age Structure Groups In Each Place of Birth Category (N = 1800)

	Canadian-born (n = 1503)				*Foreign-born (n = 297)*			
	AC (553)	*N (823)*	*AG (127)*	*F*	*AC (90)*	*N (171)*	*AG (36)*	*F*
Life Event Variables:								
Age at first marriage	19.5 (3.2)	22.6 (2.5)	28.0 (4.3)	68.3***	19.9 (4.3)	22.9 (2.6)	27.9 (4.1)	68.3***
Age at first birth	19.4 (1.6)	24.7 (2.1)	31.9 (1.9)	514.6***	19.7 (1.4)	24.7 (2.2)	32.3 (2.2)	514.6***
Birth Interval	8.2 (5.7)	5.9 (4.2)	3.8 (2.1)	8.2***	7.7 (5.1)	6.1 (4.0)	4.4 (2.9)	8.2***
Number of children	3.6 (1.8)	3.0 (1.5)	2.5 (0.7)	5.5**	3.2 (1.4)	2.9 (1.2)	2.5 (0.8)	5.5**

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